

ABSTRACT

A material comprising aerogel particles and a polytetrafluoroethylene (PTFE) binder is formed having a thermal conductivity of less than or equal to
5 25 mW/m K at atmospheric conditions. The material is moldable or formable, having little or no shedding of filler particles, and may be formed into structures such as tapes or composites, for example, by bonding the material between two outer layers. Advantageously, composites may be flexed, stretched, or bent without significant dusting or loss of insulating properties.